CBO TESTIMONY

Statement of
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Director

The Long-Term Implications of Current Defense Plans

before the
Committee on the Budget
U.S. House of Representatives

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Mr. Chairman, Congressman Spratt, and Members of the Committee, I appreciate the opportunity to discuss the long-term implications of the Administration's current defense plans. The Congressional Budget Office's (CBO's) long-term projection of the Administration's fiscal year 2004 plans is not a prediction of future budgets—every annual budget submission brings changes to the Department of Defense's (DoD's) plans and thus to defense budgets. Rather, CBO's projection indicates the demand for defense resources—as well as the ages and inventories of major weapons—that would result over the next two decades if current defense plans remained the same. For various reasons, including the long lead times associated with developing and fielding new weapons, the Administration's current plans will generally have long-lasting implications even if they are revisited in the future. CBO's projection can help defense decisionmakers understand those implications.

CBO's analysis suggests several major points.

- Carrying out today's plans for defense would require the United States to fund the military through 2022 at annual levels averaging about 10 percent higher (adjusted for inflation) than peak spending during the 1980s—and about 20 percent higher than current funding (excluding the costs of contingencies, such as operations in Afghanistan and Iraq).

- Relative to current funding, about half of the need for those additional resources is driven by steady growth in the cost of providing pay and benefits to DoD's military and civilian personnel.

- The other half is associated with substantial increases in future purchases of equipment and weapons to fill the gap created by the "procurement holiday" of the 1990s, and increases in investment funding to develop and eventually produce new equipment with capabilities that support the push for military transformation.

- If those increased resources are provided, DoD will eventually be able to halt or reverse the adverse aging trends associated with much of its current equipment.

- If those increased resources are not provided, DoD will have to either field smaller numbers of forces (or forces with less equipment) or keep equipment until it is older—perhaps significantly so—than current plans envision.

I will discuss each of those points in more detail, ending with a short discussion of other contexts in which defense spending could be considered.

The Long-Term Outlook for DoD's Resource Demands

In 2003, total obligational authority for the Department of Defense equaled about $449 billion—including a total of $74 billion added in legislation other than the 2003 appropriation acts. The Administration's 2004 Future Years Defense Program (FYDP), which covers the period from 2004 through 2009, anticipates that defense resources (excluding supplemental appropriations) will rise from about $380 billion in 2004 to $439 billion in 2009 and will average $411 billion a year over that period.[1] If the program in that FYDP was carried out as envisioned, the demand for defense resources would continue to rise through 2022, CBO projects *(see the line at the top of the "Procurement" section in Figure 1)*. That demand would average $458 billion a year between 2010 and 2022. (Those and the other dollar figures in this analysis are shown in 2004 dollars to account for the effects of inflation.) Because that projection is founded on the 2004 FYDP—including its current cost estimates for major weapons programs and other activities, where they are available—it excludes costs for continuing operations in Afghanistan and Iraq and for other activities conducted as part of the global war on terrorism.

Various factors could push the costs of current plans even higher. In addition to the projection described above, CBO estimated the long-term demand for defense resources if costs for weapons programs exceed initial estimates to the extent that they have since the Vietnam War and if costs to operate military forces grow as they have over the past two decades. That "cost-risk" case also assumes that the U.S. military continues to take an active role overseas, like the one that has resulted in the present engagements in Afghanistan, Iraq, and the global war on terrorism. With those cost risks factored in, carrying out current defense plans could require an average of $472 billion a year (rather than $411 billion) through 2009 and an average of $533 billion a year (rather than $458 billion) between 2010 and 2022. About $40 billion of the $75 billion increase in the 2010-2022 average results from potential growth in operation and support costs (including $20 billion for future contingencies). The rest comes from growth in costs to develop and purchase weapons.

The analysis I am discussing is covered in more detail in two CBO reports. One, *The Long-Term Implications of Current Defense Plans*, was published in January 2003. This past July, CBO released an update of that analysis in a paper titled *The Long-Term Implications of Current Defense Plans: Summary Update for Fiscal Year 2004*. Both reports are available on CBO's Web site (www.cbo.gov).

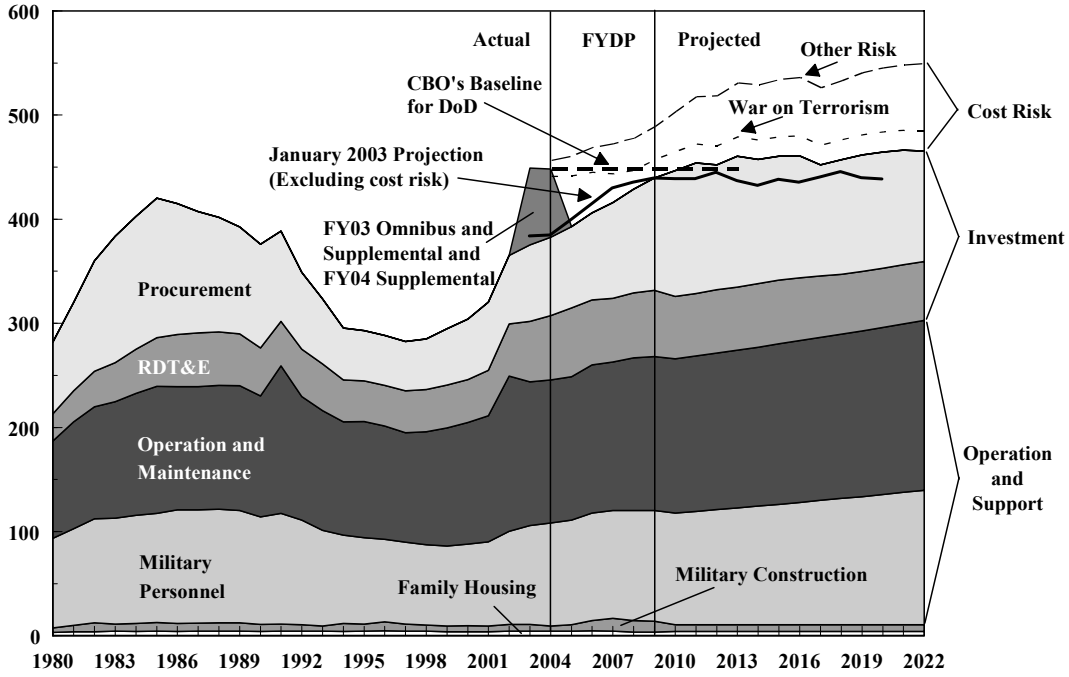
The projections in those reports are based on the defense plans that underlie the two most recent budgets that the Administration submitted to the Congress. (DoD's plans

1. In September, the Administration requested an additional $66 billion to pay the 2004 costs of the occupation of Iraq, continuing operations in Afghanistan, and other activities associated with the global war on terrorism.

Figure 1.

Past and Projected Resources for the Department of Defense

(Billions of 2004 dollars)



Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program; RDT&E = research, development, test, and evaluation; FY03 Omnibus and Supplemental and FY04 Supplemental = funding provided for fiscal year 2003 in the Consolidated Appropriations Resolution (Public Law 108-7) and the Emergency Wartime Supplemental Appropriations Act (P.L. 108-11) and the President's request for supplemental appropriations for fiscal year 2004 to fund ongoing military operations in Iraq and Afghanistan and other activities in the global war on terrorism.

continually evolve, and CBO's analyses of them are snapshots, rather like the budget snapshots that the Congress works with each year.) The January report reflects the plans underlying the 2003-2007 FYDP, on which the President's 2003 budget submission was based. CBO's July estimate reflects the 2004-2009 FYDP, which was the basis for the 2004 budget request. In drawing up the later plan, DoD reduced its funding projection for the years common to both plans (2004 through 2007) by an average of about $7 billion, or 2 percent, per year. Many changes contributed to that decreased funding, including reductions in operation and support accounts, some of which are associated with DoD's decision to liquidate its Defense Emergency Response Fund. (DoD now expects to request annual supplemental appropriations, as

it has in the past, to pay for the costs of activities, such as the occupation of Iraq, that are not included in its FYDP.)

Not surprisingly, CBO's projections of resource demands beyond the FYDP period also differed between the two reports. CBO's July projection exceeded its January projection by an annual average of about $19 billion, or 4 percent, for their common years (2010 through 2020). Several of the most significant changes underlying that difference are discussed below.

To avoid confusion, I should note that in both the January and July reports, CBO projected defense funding at a lower level of aggregation than the one used in the Congressional budget resolution. CBO projected funds only for DoD's budget (sub-function 051), whereas the budget resolution projects funds for the national defense budget function (function 050). DoD's budget makes up the lion's share of function 050, but the latter also includes dollars for defense in other agencies' budgets. In the 2004 request, those additional dollars totaled about $20 billion, mostly to fund activities of the Department of Energy related to nuclear weapons.

Projections of Resource Demands for Operation and Support

About two-thirds of the 2004 defense budget covers what DoD terms operation and support (O&S), which is the total appropriations in the military personnel and the operations and maintenance accounts. O&S funding pays the salaries and benefits of DoD's military and civilian employees, the costs associated with many of DoD's contractor personnel, the operating costs of military equipment, and many of the costs to operate and maintain defense facilities. The 2004 FYDP envisions that spending for O&S will rise from $236 billion in 2004 to $254 billion in 2009 *(see Figure 2)*. Despite that increase, the Administration's plan projects that O&S spending will decline as a share of the total defense budget: from about 62 percent in 2004 to about 58 percent in 2009.

CBO made two projections of the costs of current plans for operation and support—with and without risks of cost growth. Both projections assume that military and civilian end strengths are fixed at the levels they would reach in 2009 under the 2004 FYDP.

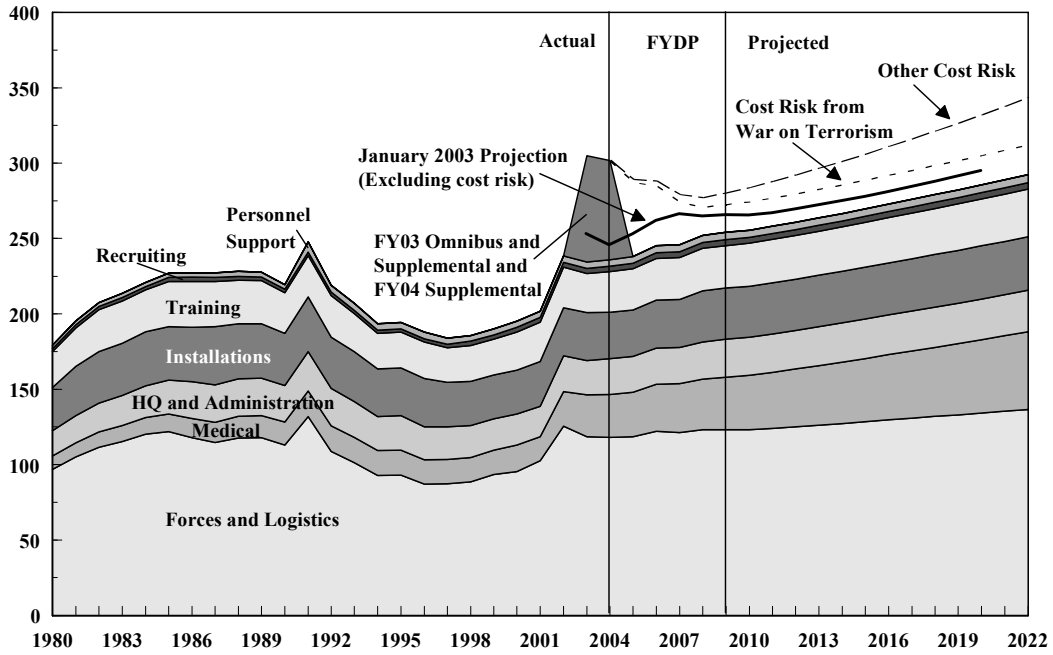
O&S Resource Demands

CBO projects that carrying out current defense plans would require O&S spending to average $273 billion over the 2010-2022 period, if no adjustments are made for cost risk. Such spending would end that period at an annual level of $292 billion. In that projection, O&S spending grows by an average of about 1 percent per year between 2004 and 2022. Virtually all of the growth results from personnel-related

Figure 2.

Past and Projected Resources for Operation and Support

(Billions of 2004 dollars)



Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program; HQ = headquarters; FY03 Omnibus and Supplemental and FY04 Supplemental = funding provided for fiscal year 2003 in the Consolidated Appropriations Resolution (Public Law 108-7) and the Emergency Wartime Supplemental Appropriations Act (P.L. 108-11) and the President's request for supplemental appropriations for fiscal year 2004 to fund ongoing military operations in Iraq and Afghanistan and other activities in the global war on terrorism. CBO estimates that the majority of that additional funding for 2003 and 2004 will be used to fund forces and logistics.

increases—specifically, the growing cost of medical benefits and rising real (inflation-adjusted) wages for military and civilian personnel.

Medical Costs. If current military health care benefits remain unchanged, DoD's costs for medical care will almost double over the next two decades, CBO projects. Including accrual payments for the medical benefits of military retirees over age 65, total medical costs will rise from $28 billion in 2004 to $35 billion in 2009 and $52 billion in 2022.[2] By the end of that period, DoD would be spending 73 cents on medical benefits for each dollar it spent on cash compensation for its personnel, compared with 55 cents today.

2. For a discussion of DoD's medical costs, see Congressional Budget Office, *Growth in Medical Spending by the Department of Defense* (September 2003).

Those projections assume that no legislated increases in medical benefits occur but that medical costs for retirees grow at the nominal rate of 6.25 percent a year, the rate DoD's actuaries currently use. The estimates also assume that medical costs for other DoD beneficiaries increase at the rates now projected by the Department of Health and Human Services for per capita medical spending in the U.S. economy as a whole.

Pay for Military Personnel. Current law dictates that over the next three years, pay for DoD's military personnel should grow at a rate 0.5 percentage points higher than the annual change in the employment cost index, which measures pay in the civilian economy. After that, DoD plans to have military pay grow at the same rate as those civilian-sector increases. CBO's projection assumes that such growth rates will continue over the long term, resulting in roughly a 30 percent real increase in military pay between 2004 and 2022.

Costs for Facilities. DoD included a total of about $11 billion in military construction funding in its most recent FYDP to pay the up-front costs of the proposed 2005 round of base realignments and closures (BRAC). Judging from past rounds, a 2005 BRAC round with those up-front costs could eventually produce annual savings of $3 billion. CBO's projection assumes that any savings realized from the 2005 round are reinvested to pay for increased levels of maintenance on DoD's remaining facilities.

O&S Resource Demands with Cost Risks

With various possible sources of cost growth factored in, resource demands for operation and support would average about $313 billion per year during the 2010-2022 period under current plans, CBO projects. That figure is about 14 percent higher than the average for O&S spending without cost risk. By 2022, spending would reach $344 billion, or about 18 percent more than in the projection without cost risk. Roughly one-third of the projected O&S risk is associated with the potential costs of contingencies. The rest reflects growth in the cost of medical care, personnel-support activities, and the operating of weapons as well as forgone savings from delays in closing additional military bases.

Medical Costs. Changes in technology, medical standards, and overall prices for health care in the U.S. economy could drive DoD's medical costs higher than the department's actuaries anticipate and than CBO assumed in its initial projection. In particular, the future growth rate of per capita medical spending in the U.S. economy as a whole (on which CBO's projection of medical spending without cost risk is based) is uncertain. If that rate turned out to be 30 percent higher than expected —which is consistent with the record of differences between some past projections and actual growth—DoD's medical costs would be about $13 billion higher by 2022. (Conversely, if growth rates were 30 percent lower, which is also consistent with the historical record, medical costs would be $11 billion lower in 2022 than projected.)

Personnel-Support Costs. Another risk to projections of O&S costs is that resource demands for personnel-support activities—which include many high-priority quality-of-life initiatives—will continue the upward trend seen in recent years rather than remain at the levels that those activities are projected to receive at the end of the 2004 FYDP. A continuation of that upward trend could add $1 billion a year to the long-term cost of the Administration's current plans by 2022, CBO projects.

Costs for Facilities. The possibility exists that the 2005 round of base realignments and closures will not occur. In that case, DoD would save a total of $11 billion between 2005 and 2012 from not implementing the round, but its costs for facilities would be about $3 billion per year higher after that.

Equipment Operating Costs. CBO's projection of O&S resource demands without cost risk assumes, as DoD generally does, that new generations of weapon systems are no more expensive to operate and maintain than the systems they replace. But in the past, new generations of weapons have usually cost more to buy than their predecessors did. They also commonly cost more to operate and support. Unfortunately, the cost of operating existing weapons also typically increases as systems age.

CBO's projection with cost risk takes those factors into account. For aircraft and ships, CBO incorporated estimates reflecting the cost growth that DoD experienced as it fielded new systems or as systems grew older. CBO lacks historical data to calculate similar factors for the Army's ground combat systems, so it could not include detailed estimates for them. But the Army's operating costs, like DoD's total operating costs, have grown on a per capita basis for a very long time, and CBO assumed in its projection with cost risk that those trends would continue for Army systems. The combination of those effects could add $14 billion to the annual operating costs of the Administration's current plans by 2022.

Near-Term Costs of Contingencies: CBO's July 2003 Projections. Neither the 2004 FYDP nor CBO's projection of O&S spending without cost risk includes funding for ongoing operations in Iraq and Afghanistan. The President has requested about $66 billion in supplemental appropriations for DoD in 2004, including about $52 billion for the occupation in Iraq and $14 billion for operations in Afghanistan and other global antiterrorism activities. In its July projection with cost risk, CBO estimated that those activities (excluding the rebuilding of Iraq's infrastructure) could cost as much as $59 billion in 2004. That amount would be enough, CBO calculated, to maintain an occupation force of 200,000 troops in Iraq and Kuwait (at a cost of

about $47 billion) and to continue activities in Afghanistan and in the global war on terrorism at their current level (about $12 billion).[3]

Near-Term Costs of Contingencies: Estimates Consistent with More-Recent Analyses. After CBO had completed its July estimates of the near-term cost risk associated with contingencies, it produced an analysis for Senator Robert Byrd of the size and costs of occupation forces that the United States could sustain indefinitely in Iraq without harming the readiness and quality of the all-volunteer force.[4] That analysis used a more detailed cost-estimating methodology than CBO had employed before for estimating occupation costs. Applying that methodology to an occupation force of 200,000 military personnel yields yearly costs of about $36 billion to $41 billion—or $6 billion to $11 billion less than CBO's previous estimate. However, CBO's analysis, which was consistent with plans that DoD had announced in July, indicated that the military would be hard-pressed to sustain a 200,000-person occupation throughout 2004. (The current U.S. occupation force comprises about 140,000 military personnel.) That analysis concluded that unless DoD took such actions as mobilizing a large number of additional reserve units on a continuing basis or extending the deployments of active-component forces beyond one year, it would be able to indefinitely sustain force levels of no more than about 67,000 to 106,000 military personnel (at a cost of $14 billion to $19 billion per year) in Iraq beyond the winter of 2004.

The Administration's recent request for supplemental appropriations uses different assumptions than the ones CBO has used over the past year to estimate the potential costs of occupying Iraq. To reconcile its estimates with that request, CBO would need information that it now lacks, including (but not limited to):

- A breakdown of the active- and reserve-component personnel and units to be used in Iraq throughout 2004 by each of the four services;
- A breakdown of the types and amounts of depot maintenance to be conducted on equipment as a result of activities in Iraq; and
- A breakdown of the actual costs that each service has incurred to date for activities in support of the occupation that have been conducted since the end of major combat operations in Iraq.

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3. CBO calculated those values using the following assumptions: that a 200,000-person occupation force would cost $3.8 billion per month (reflecting an estimate that CBO made in September 2002), and that ongoing operations in Afghanistan and other activities associated with the war on terrorism could cost an additional $1 billion per month (based on information from DoD).

4. Congressional Budget Office, *Letter to the Honorable Robert Byrd Regarding the U.S. Military's Ability to Sustain an Occupation in Iraq* (September 3, 2003).

Long-Term Costs of Contingencies. Over the longer term, cost risk associated with the global war on terrorism could amount to about $20 billion a year, CBO projects. That amount is based on the assumption that, between 2005 and 2008, the size of the U.S. force in Iraq declines to 50,000 troops, the intensity of operations in Afghanistan drops to the level of the operations now taking place in Bosnia and Kosovo, and other activities now being conducted as part of the war on terrorism continue indefinitely at their current funding levels. That $20 billion estimate is simply a proxy for the budgetary impact of continued engagement by the U.S. military in such operations abroad. If the global situation changes in the future in a way that increases or decreases the need for U.S. military engagement overseas, then costs will rise or fall as well.

Projections of Resource Demands for Military Construction and Family Housing

The military construction title of DoD's budget contains funds to build and refurbish the department's facilities. The family housing title contains funds for the same purposes for the housing provided to service members; it also covers some of the maintenance of that housing. For 2004, funding in those accounts totals about $5 billion and $4 billion, respectively, or about 2 percent of DoD's budget request. CBO projects no significant changes in those annual costs through 2022—at least in part because any added costs are assumed to be offset by savings from closing or realigning bases and from privatizing family housing. (Historical funding and projected resource demands for those accounts are shown in *Figure 1* on page 3. The increase in military construction funding during the FYDP period is intended to cover the costs of the 2005 BRAC round.)

Projections of Resource Demands for Investment

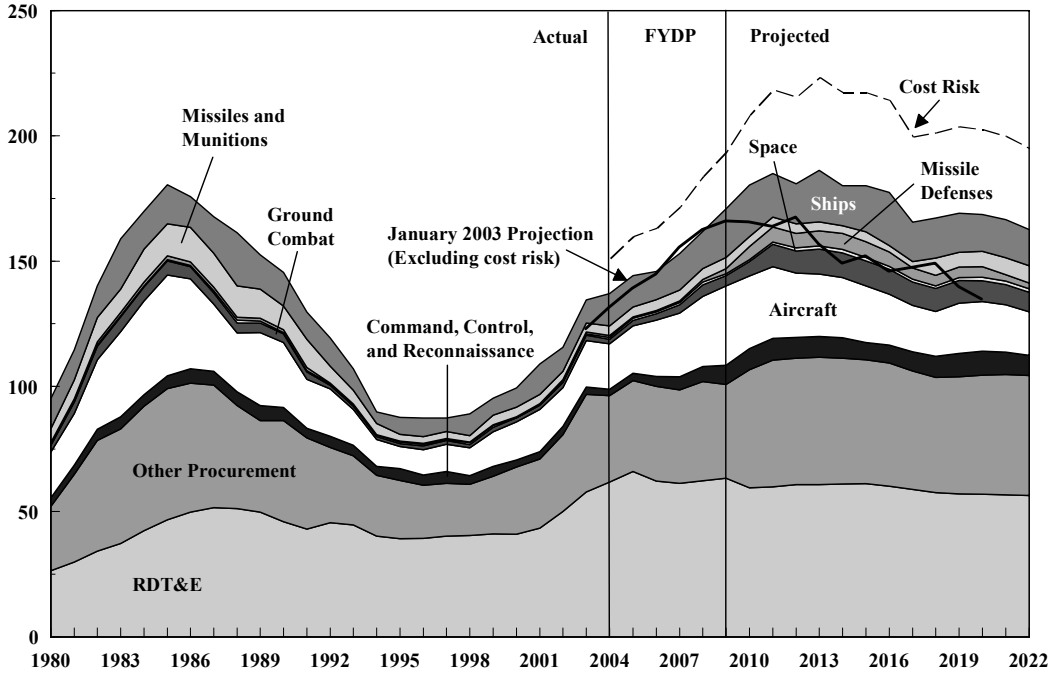
In 2003, the one-third of DoD's budget not devoted to operation and support, military construction, or family housing went to investment. That category consists of funds in the research, development, test, and evaluation (RDT&E) and procurement accounts, which pay for developing, testing, and buying weapon systems and other equipment. The 2004 FYDP envisions that spending for investment will rise from $137 billion in 2004 to $171 billion in 2009. That funding averages about $3 billion more per year over the 2004-2007 period than it did in the 2003 FYDP, with much of the increase coming from funds that the Administration added for transformation; higher spending on command, control, communications, and intelligence systems; and higher weapons costs.

CBO projects that under current plans, resource demands for investment—not including cost risk—would continue to rise after 2009, peak in 2013 at about $186

Figure 3.

Past and Projected Resources for Investment, by Type of Weapon

(Billions of 2004 dollars)



Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program; RDT&E = research, development, test, and evaluation.

billion, and then decline modestly *(see Figure 3)*. Over the 2010-2022 period, the demand for funding would average about $175 billion a year, CBO projects *(see Table 1)*. Factoring in possible sources of cost growth pushes that average to $209 billion a year, with the demand peaking at $224 billion in 2013. Purchases of new ships and aircraft (primarily tactical fighters) account for more than half of the funds for procurement of major systems in CBO's projections.

Army Investment

The Army has historically spent more of its budget on troops, largely funded in the O&S accounts, than it has on their equipment, which is paid for in the investment accounts. As a result, the Army has received the smallest investment funding of the services: an average of about $22 billion a year from 1980 to 2003, compared with $43 billion for the Department of the Navy (which includes the Marine Corps) and $48 billion for the Air Force. (The services' investment budgets exhibit the same cyclical trends as total investment spending—rising in the mid-1980s, falling through the late 1990s, and then rising again; *see Figure 4*.)

Table 1.

Investment Spending by Service

(In billions of 2004 dollars of total obligational authority and in percent)

	2003		Average, 2004-2009		Average, 2010-2022		Peak Spending	
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Year
Without Cost Risk								
Army	20	15	22	15	38	22	42	2014
Navy	41	31	50	33	47	27	64	2010
Air Force	47	35	55	36	65	37	72	2021
Defense Agencies	26	19	25	16	24	14	28	2009
Total	**135**	**100**	**152**	**100**	**175**	**100**	**186**	**2013**
With Cost Risk								
Army	20	15	29	17	53	26	59	2014
Navy	41	31	55	32	56	27	74	2010
Air Force	47	35	59	35	74	37	84	2021
Defense Agencies	26	19	28	16	26	12	31	2009
Total	**135**	**100**	**171**	**100**	**209**	**100**	**224**	**2013**

Source: Congressional Budget Office.

Note: Numbers may not add up to totals because of rounding.

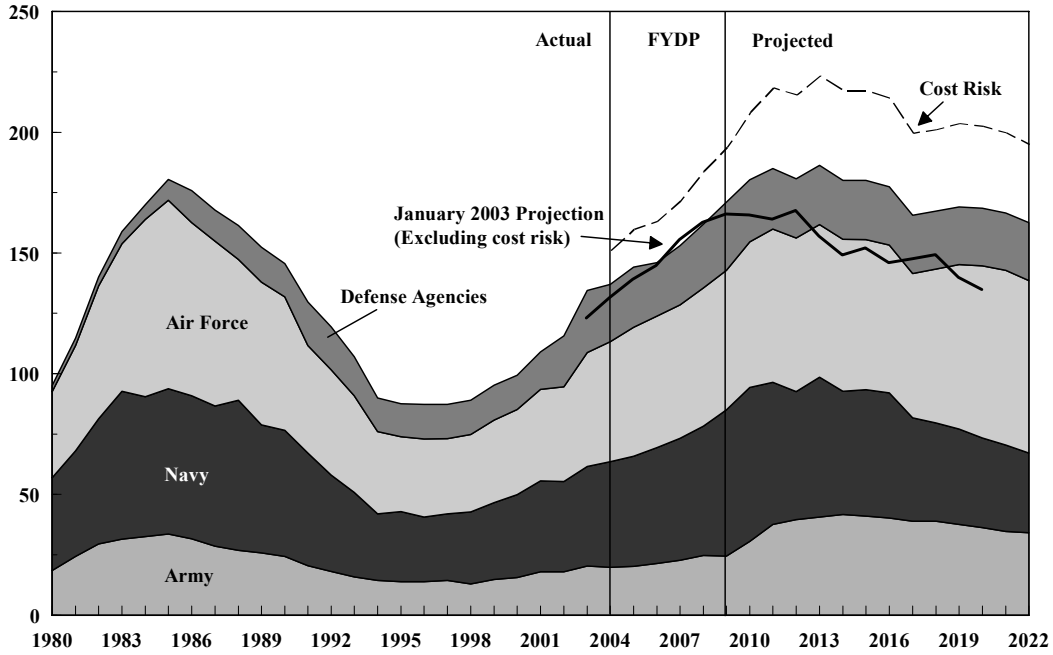
In the 2004 FYDP, the Army's investment budget increases gradually through 2009. After that, continuing to carry out the plans in the FYDP would cause Army investment to jump by more than $13 billion in the next two years, CBO projects. It would reach a peak in 2014 of almost $42 billion—24 percent higher than its previous peak, in 1985. The Army's investment budget would decline modestly thereafter, staying within $8 billion of that peak through 2022 and averaging $38 billion over the 2010-2022 period.

The increase in Army investment spending is driven by added purchases of new helicopters and upgrades to existing helicopters, funding for missile defense programs (such as the Patriot PAC-3 and the Theater High Altitude Area Defense System) that transfers to services' budgets when the systems enter procurement, funds to increase the computerization of Army systems, and a variety of other actions that the Army would like to take to transform itself. The single biggest cause of the increase is the Army's plan to purchase a family of ground combat vehicles, which it calls the Future Combat System (FCS). The Army wants the FCS to eventually replace virtually all of its ground combat systems, including the Bradley Fighting Vehicle and the Abrams tank.

Figure 4.

Past and Projected Resources for Investment, by Service

(Billions of 2004 dollars)



Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program; RDT&E = research, development, test, and evaluation.

If historical patterns of cost growth persisted, resource demands for Army investment would be much higher, averaging $53 billion over the 2010-2022 period, or about 40 percent more than in CBO's projection without cost risk. The FCS program is responsible for much of that difference. Ground combat systems have experienced greater cost growth than any other type of weapon—both development and procurement costs have turned out to be about 70 percent higher than early estimates. And the FCS's costs (to which that percentage increase is applied) make up a large share of the Army's future demand for investment spending.

Navy and Marine Corps Investment

The current FYDP would increase investment funding for the Navy and Marine Corps (both included here under the term "Navy") from $44 billion in 2004 to $60 billion in 2009. Under that plan, resource demands for investment would peak the next year at $64 billion (excluding cost risk), CBO projects, and then gradually decline to $33 billion by 2022. Overall, the Navy's investment costs average a little more than $47 billion a year over the 2010-2022 period in CBO's projection without cost risk. If costs grew as they have in the past, however, investment demands could

peak at about $74 billion in 2010 and then fall to about $39 billion by 2022, averaging $56 billion a year during that period.

Funds to purchase battle force ships make up the lion's share of the Navy's procurement increases. The Navy plans to expand its fleet from about 300 ships today to 375 by 2022, in part by adding a relatively large number of smaller littoral combat ships (LCSs). The Navy's plans are outlined in the *Report to Congress on Annual Long-Range Plan for the Construction of Naval Vessels*. That report envisions spending an average of $16 billion a year (in 2003 dollars) between 2004 and 2025 to build new ships and upgrade old ones. CBO's projection is roughly consistent with that report because it too projects that the Navy would need to spend slightly more than $16 billion a year (in 2004 dollars) between 2004 and 2022 to build a 375-ship fleet, including the LCSs. If past trends in cost growth continued, they would drive that annual average to $19 billion.

With respect to aircraft procurement, the Navy and Marine Corps now plan to integrate their tactical aircraft forces more fully, resulting in less need for new planes than in last year's plans. Despite that integration, spending on naval tactical aircraft would need to rise. Fully funding the program of aircraft modernization envisioned in the 2004 FYDP would require the Navy to spend an average of $9.7 billion a year between 2004 and 2022, CBO projects, or $11.4 billion a year with cost risk. By comparison, the Navy spent $8.6 billion on tactical aircraft in 2003.

Air Force Investment

The Air Force typically has the largest investment budget of any of the services. Over the past two decades, it has received an average of about $48 billion per year (38 percent of DoD's total investment spending), compared with $22 billion (17 percent) for the Army and $43 billion (35 percent) for the Navy. (The other 10 percent was spent by defense agencies.)

In DoD's current plans, Air Force investment would increase from $50 billion in 2004 to $58 billion by 2009. After that, the service's demand for investment resources would continue to grow, CBO projects, reaching about $63 billion by 2011. It would then remain relatively constant (or decline slightly) through 2017, after which it would grow rapidly to a peak of $72 billion in 2021. Over the 2010-2022 period, Air Force investment would average about $65 billion a year, CBO projects.

The increases during the next decade or so occur partly because the Joint Strike Fighter (JSF) is scheduled to move from development into production and because funds for intelligence and command-and-control capabilities are projected to rise. The growth after 2017 comes from CBO's assumptions about two new strategic systems that would replace or augment today's bomber force and replace today's land-based intercontinental ballistic missiles (ICBMs). DoD is now conducting concept

studies to determine what those replacements might be, and plans for their development and purchase are likely to change from year to year as those studies progress. In the absence of firm plans, CBO used experience with the costs and schedules of previous bombers and ICBMs to guide its projections. In timing the beginnings of those programs, CBO considered the ages of the fleets, the time it took to develop and field today's systems, and the potential impact that DoD's transformation efforts might have on the future demand for those systems.

If the past cost growth in Air Force investment programs presages future increases, the service's investment needs could be greater. Incorporating historical cost growth for Air Force programs into CBO's projection indicates that annual spending could average about $74 billion over the 2010-2022 period, or 14 percent more than in CBO's projection without risk. Peak spending could equal $84 billion, or 17 percent more than CBO projected without cost risk.

Investment for Defense Agencies

In addition to funding the Departments of the Army, Navy, and Air Force, DoD's budget provides money for a variety of specialized agencies that are responsible for performing advanced research, developing missile defenses, overseeing special operations, and developing and managing information systems. DoD plans to spend almost $24 billion on those activities in 2004 and an average of $25 billion a year over the 2004-2009 period. Thereafter, CBO's projection of annual defense agency investment averages $24 billion between 2010 and 2022 without cost risk and $26 billion with such risk.

Funding for defense agency investment in the 2004 FYDP exceeds the level in the 2003 FYDP by an average of almost $2 billion a year. CBO's projection of resource demands for such investment over the 2010-2020 period was about $8 billion greater in its July update than in its January report, for two main reasons. First, the Administration created a new defense agency investment account for programs that would transform the U.S. military. Because transformation has been such a high priority of this Administration, CBO assumed that spending for those programs would continue at the 2009 level. Second, the Missile Defense Agency added funds through 2009 to develop new ground- and space-based interceptors. Given the high priority accorded to such activities in the Administration's plans, CBO projected that funding for those interceptors would hold steady through the end of the projection period.

Today's Plans and Tomorrow's Forces

Will the level of investment resources that is necessary to carry out the plans in the 2004 FYDP over the long term buy enough equipment to keep forces at desired levels and to keep the average age of equipment at acceptable levels? The answer to that

Table 2.

Average Age of Major Equipment, by Service and Type of System

Type of Equipment	Examples	Half-Life (Years)[a]	Average Age (Years)			
			1990	2000	2010	2020
		Army				
Ground Combat Vehicles	M1 Abrams, Stryker, FCS	10-15	6	10	17	17
Helicopters	AH-64, UH-60, Comanche	12-18	17	18	19	13
		Navy and Marine Corps				
Battle Force Ships	CVN, SSN, DDG, CG	14-18	17	14	17	16
Fighter and Attack Aircraft	F-14, F-18, JSF	10-15	11	12	14	11
Helicopters	AH-1, V-22, CH-53	16-23	17	22	18	9
Ground Combat Vehicles	LAV, AAV	10-15	5	13	19	11
		Air Force				
Fighter and Attack Aircraft	F-16, F-22, JSF	10-15	10	14	20	15
Bombers	B-1, B-2, B-52	35-40	22	24	35	45
Airlifters	C-5, C-17, C-130	18-23	20	23	23	27
Tankers	KC-10, KC-767	28-33	28	37	40	34

Source: Congressional Budget Office.

a. The half-life is one-half of the full expected service life of equipment. If the average age of an inventory of equipment is within the half-life range, that inventory is not composed of large amounts of old equipment potentially nearing obsolescence.

question depends to some extent on the condition of today's forces. For most major types of military equipment, average age has been increasing since 1990. It will continue to grow through 2010—or, in the case of some aircraft, through 2020—CBO estimates *(see Table 2)*.

CBO has made projections of weapons inventories and their average ages for more than 20 years, using a simple method. We start with data from each service about how many weapons of different types it has and how old those weapons are. For each

year of a projection period, we add to the inventory the deliveries that result from planned purchases, subtract the losses from planned retirements or peacetime attrition (again using the services' estimates), add a year to the age of each individual weapon, and calculate an average age for the total inventory. That simple arithmetic suggests that average ages should fall when DoD purchases large numbers of systems and rise when it buys few systems. Average ages will also decline if large numbers of older systems are retired, which can occur when forces are cut.

Between 1990 and 2000, nine of the 10 weapons inventories shown in *Table 2* grew older, on average. The average age of the Army's ground combat vehicles nearly doubled during that period, and the average age of the same weapons in the Marine Corps more than doubled. Air Force fighters' and tankers' average ages grew by about one-third.

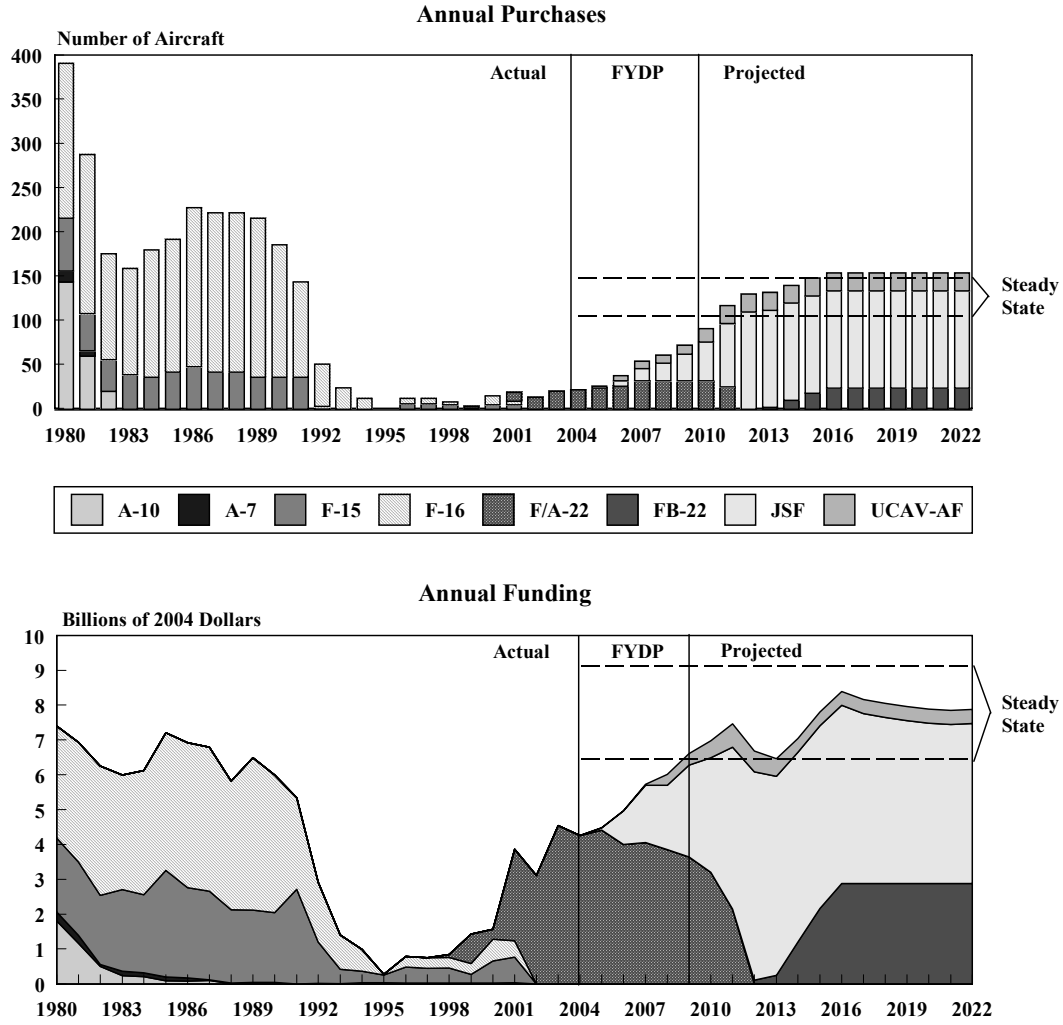
That aging occurred because DoD's investment budgets, which peaked at $180 billion a year in the 1980s, fell to less than $90 billion a year in the 1994-1998 period. Not surprisingly, the decline in funding resulted in fewer purchases of major weapons for the military services. For example, procurement of Air Force tactical fighters averaged about 16 planes per year from 1992 to 2001—well below the steady-state level of purchases (106 to 149 aircraft per year) necessary to keep the average age of Air Force fighters from increasing *(see Figure 5)*. On the basis of DoD's current plans, CBO's projection incorporates rapidly growing purchases of fighters beyond 2009. The large deliveries of new aircraft that result from those purchases cause the average age of the tactical fighter fleet to decline after 2013.

Increases in the average ages of DoD's weapons stocks between 1990 and 2000 occurred despite the retirements made possible by the substantial force cuts that followed the end of the Cold War. For example, the Army reduced its number of combat divisions by about one-third, and the Air Force cut its tactical air wings in half, allowing those services to retire large numbers of older tanks and fighters, respectively. Fleets of Navy battle force ships also shrank during that period, and those retirements, combined with continued Navy ship purchases during the 1990s, reduced the average age of battle force ships—the only category of weapons in *Table 2* that actually decreased in average age over that period.

DoD may be able to make further reductions in forces. The Administration cut naval aviation forces this past year with its move to incorporate Marine Corps fighter forces into Navy air wings. But such reductions may be much too small to eliminate the resource pressures that CBO's projections indicate.

Figure 5.

Procurement of Air Force Fighter and Attack Aircraft



Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program; JSF = Joint Strike Fighter; UCAV-AF = unmanned combat air vehicle for the Air Force; steady state = the amount of purchases (and funding) needed to keep the average age of the Air Force's fighter and attack aircraft from increasing.

Defense Spending in Other Contexts

I would like to close with a few thoughts about how defense funds fit in with the rest of federal spending and about the impact that economic trends might have on the availability of those funds.

Defense as a Share of Gross Domestic Product

Some defense leaders have argued that DoD should receive a constant share of the nation's income as measured by its gross domestic product (GDP). For instance, General Gordon Sullivan, a former Chief of Staff of the Army, suggested pegging a floor for the defense budget at about 4 percent of GDP. Proponents of spending a constant share of GDP argue that defense spending is an investment in security that should grow along with the nation's wealth.

DoD's share of GDP has not exhibited such constancy in the past *(see Figure 6)*. That share stood at about 5 percent of GDP in 1980, approached 6 percent in 1983, and remained close to that level through 1987. It then declined as defense outlays dropped in the late 1980s and fell further after the Cold War, eventually reaching a nadir of about 3 percent in 1999. In recent years, DoD's share of GDP has been increasing, and it is likely to grow again in 2004 when all supplemental funding is added in.

If the plans in the 2004 FYDP were carried out through 2022, DoD would still not receive a constant share of GDP, CBO projects. The funding proposed for DoD in the FYDP absorbs a roughly stable share of gross domestic product (as projected by CBO) through 2009—an average of 3.4 percent per year over that period. But CBO's projection of the growth of real GDP in 2010 and beyond exceeds 2 percent per year, whereas its projection of DoD's resource demands grows by an average of only 0.5 percent per year over that period.

Defense as a Share of Federal Spending

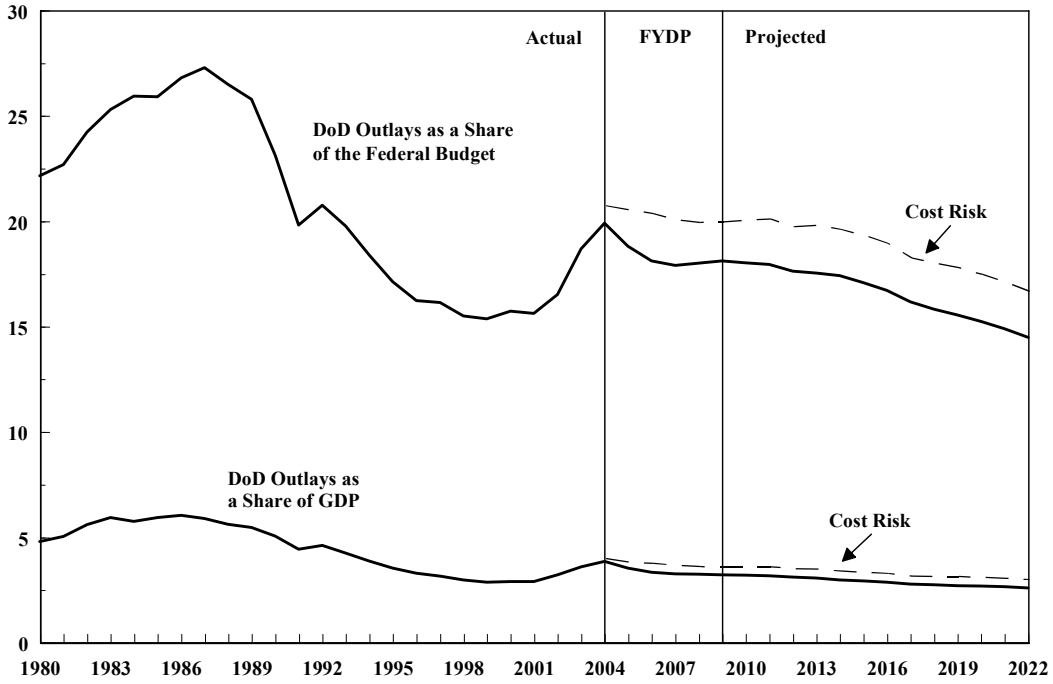
DoD's share of federal spending has not been constant either. In the past five years, it has grown from about 15 percent of the federal budget in 1999 to about 19 percent of the budget in 2003 *(see Figure 6)*. That increase followed more than a decade of declines from the peak in the late 1980s, when DoD received about 27 percent of federal spending.

The Administration's budget request for DoD in 2004 (including supplemental funding) represents about 20 percent of federal spending. If the Administration's current plans were carried out, defense would make up about 18 percent of the federal budget through 2009. Thereafter, its share would decline, falling to about 14 percent by 2022, according to CBO's long-term projection of the resource demands implied by current defense plans. That decline occurs because projected increases in spending for mandatory programs such as Social Security, Medicare, and Medicaid outpace CBO's projection of growth in defense.

Figure 6.

Total Outlays for the Department of Defense as a Share of the Federal Budget and of Gross Domestic Product

(Percent)



Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program.

Differences Between CBO's Long-Term Projection and CBO's Baseline

Committee staff asked me to point out that the long-term projections presented today are different from the defense projections in CBO's 10-year baseline, which appeared in our update to the *Budget and Economic Outlook,* about which I testified in September. In CBO's baseline estimate, defense discretionary funding equaled about $465 billion in 2004—$83 billion more than in the long-term projection of defense resource demands without cost risk.

Two factors account for the difference. First, as noted earlier, CBO's long-term projection looks only at funding for DoD (budget subfunction 051), whereas its baseline projects all national defense spending (function 050). Funding for agencies other than DoD adds almost $20 billion per year to defense spending *(see the line in Figure 1 labeled "CBO's Baseline for DoD")*. Second, neither the 2004 FYDP nor CBO's long-term projection without cost risk (which is based on it) includes the $74 billion that was appropriated in 2003 for contingencies and other purposes. However,

as directed by law, CBO's baseline estimate of future defense outlays does include that supplemental appropriation.

Differences between CBO's baseline and its long-term defense projection diminish over time because CBO projects real growth of about 2 percent per year for DoD through 2013 in its projection without cost risk, whereas CBO's baseline projects no real growth for DoD in those years *(see Figure 1)*. The specifics of CBO's baseline projections—which adjust discretionary funds only for inflation—are directed by law.